

State of California  
AIR RESOURCES BOARD

Summary of Board Meeting  
October 24, 2002

Air Resources Board  
Auditorium, Annex IV  
9528 Telstar Avenue  
El Monte, California

MEMBERS PRESENT: Hons. Alan C. Lloyd, Ph.D., Chairman  
William A. Burke  
Joseph C. Calhoun, P.E.  
C. Hugh Friedman  
William F. Friedman, M.D.  
Matthew R. McKinnon  
Barbara Patrick  
Barbara Riordan  
Ron Roberts

**AGENDA ITEM #**

**02-8-1 Public Meeting to Provide the Board with the Status on the Fresno Asthmatic Children's Environment Study (FACES)**

SUMMARY OF AGENDA ITEM:

Dr. Ira Tager, from UC Berkeley's School of Public Health, presented a progress report on Air Resources Board's (ARB or Board) Fresno Asthmatic Children's Environment Study, referred to as FACES. FACES is the first study to be sponsored under the auspices of ARB's Vulnerable Populations Research Program. The overall goal of the FACES project is to determine the effects of different components of particulate matter, in combination with other ambient and environmental factors, on the natural history of asthma in young children. The information gained from this study will help the Board to understand the adverse effects of air pollution on this potentially susceptible subpopulation of asthmatic children.

Dr. Tager, the Primary Investigator for the project, presented updated information on recruitment and retention, air quality monitoring activities, and data analysis activities. The Board had a number of questions on the study. The sample size for the study has been reduced, due to problems in recruitment. The Board requested that the FACES External Advisory Panel, a panel of

experts in the health and exposure assessment fields, be convened to address the issues of the reduced sample size and the impact this may have on the study as well as the ability of the study to meet its original objectives. In addition, Board Member Matthew McKinnon offered to assist with recruitment. The FACES will be presented to the Board for possible renewed funding at the December 12, 2002 Board Meeting, depending on the outcome of the meeting of the FACES External Advisory Panel to address the concerns of the impact of the reduced sample size on the study.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None

RESPONSIBLE DIVISION: Research Division

STAFF REPORT: None

**02-8-2      Public Hearing to Consider the Adoption of Amendments to the Regulation for a Public Transit Bus Fleet Rule and Interim Certification Procedures for Hybrid Electric Urban Transit Buses**

**SUMMARY OF AGENDA ITEM:**

The Air Resources Board (ARB or Board) considered modifications to the February 2000 urban transit bus rulemaking and a new interim certification procedure for hybrid electric vehicles used in the urban transit bus and heavy-duty vehicle classes. Staff had previously reported that diesel particulate filter technology was not available for pre-1994 urban bus engines. Diesel particulate matter (PM) emission reductions anticipated from the original February 2000 urban transit bus fleet requirements would therefore not be achieved. At this hearing, staff presented the Board with a new approach for achieving similar diesel PM emission reductions from urban transit bus fleets. The new strategy requires each transit agency to calculate its total diesel PM fleet emissions as of January 1, 2002, and reduce those emissions from its diesel fleet by fixed percentages, beginning January 1, 2004. By 2007 for diesel path transit agencies and by 2009 for alternative fuel transit agencies, each transit agency must reduce its total diesel PM emissions by 85 percent. The new proposal will reduce diesel PM by about 180 pounds per day in 2010 at a cost of \$25 per pound.

Staff also presented modifications to the urban transit bus fleet rule that include provisions to allow the following. Urban transit bus agencies on the diesel path in the South Coast Air Quality Management District may make a one-time change to the

alternative fuel path. Urban transit bus agencies on the diesel path may purchase alternative fuel engines certified at the 2.5 grams per brake horsepower hour (g/bhp-hr) oxides of nitrogen plus non-methane hydrocarbon (NOx+NMHC) standard from 2004 through 2006. ARB's Executive Officer may grant a compliance extension for small transit agencies due to financial hardship. Any fuel verified by ARB's Executive Officer as a diesel emission control strategy may be used in place of the ultra-low sulfur fuel. Other modifications presented included additional definitions for clarification purposes and changes to the reporting requirements.

Staff had proposed to change the definition of alternative fuel to include a specific new engine technology that uses diesel fuel only for pilot ignition. Instead, the Board asked staff to leave the definition of alternative fuel as is, except for adding hydrogen explicitly as an alternative fuel and gasoline-hybrid electric explicitly as an example of an alternative fuel technology. Staff will be proposing this change in 15-day changes, along with a new definition of a heavy-duty pilot ignition engine, which will be allowed to certify to the alternative fuel standards and to be used by transit agencies on the alternative fuel path.

The second part of the agenda item was a new interim certification procedure for hybrid-electric vehicles used in the urban bus and heavy-duty vehicle classes. The interim certification procedure incorporates a modified version of the April 2002 Society of Automotive Engineers J2711 as the testing protocol. This protocol is a chassis-based procedure modified by staff of ARB, with input from the United States Environmental Protection Agency and industry stakeholders, for clarity and use in California. When a manufacturer follows the test procedure, a two-party certification will be allowed for three years (through the 2006 Model Year). Beginning with the 2007 model year, hybrid electric bus certification will be the responsibility of one party.

#### ORAL TESTIMONY:

Mr. Henry Hogo, South Coast Air Quality Management District  
Mr. Joshua Shaw, California Transit Association  
Mr. Arthur Douwes, Valley Transit Authority  
Mr. Gene Walker, Golden Gate Transit  
Mr. Edward Bass, Allison Transmission  
Mr. Tom Balon, M.J. Bradley & Associates  
Mr. Joshua Goldman, ISE Research  
Dr. Joseph Kubsh, MECA  
Ms. Bonnie Holmes-Gen, American Lung Association  
Mr. Richard McPherson, Dipetane Combustion Technologies

## FORMAL BOARD ACTION:

The Board voted unanimously to adopt the staff's proposal with the revised recommendations discussed above. The Board also directed staff to modify the alternative fuel definition to explicitly define hydrogen as an alternative fuel and a gasoline-hybrid electric system as a technology that uses alternative fuel.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: Yes

**02-8-3 Public Meeting to Update the Board on the Status of the Off-Road Emission Control Programs for Spark-Ignition and Compression-Ignition Engines**

## SUMMARY OF AGENDA ITEM:

Staff presented to the Board its assessment of the current status of the off-road engine certification and the prospects for improvement in the near- and long-term. As a result of federal and state regulations as well as other market forces, the state of emission control technology for off-road engines has progressed significantly in the last decade. Most recently, in 1998, 2000, and 2001 the Board adopted regulations for off-road spark-ignition engines and compression-ignition engines. The new regulations will significantly reduce the statewide HC+NO<sub>x</sub> emissions from off-road engines by 2010. Staff's presentation covered the small off-road engine, large spark-ignition engine, recreational marine, and compression-ignition engine programs.

Staff presented research that indicated that while there has been relatively little effect on the production volumes of small off-road engines overall, production of the handheld engine segment declined in 2000. However, manufacturers have indicated that the market will rebound as they develop more complying product. Staff noted that the 2001 and 2002 production numbers confirm a rebound in this category. Implementation of emission standards for large spark-ignition engines began in 2001 and manufacturers have complied with the regulatory phase-in requirement and have certified additional 2002 model year large-spark ignition engines to California's standards. Based on the information provided, manufacturers are on track for meeting 2004 emissions requirements, with many certifying engines well below the current emissions standards. Compliance with the recreational marine standards has also been achieved through improved fueling and combustion techniques, and by transitioning from two-cycle to four-cycle engines. The cleanest recreational marine engines receive a

three-star label to promote easy recognition by the public. Past and present emission standards for compression-ignition engines have been met mostly through engine modifications such as improved fueling and turbocharging, and with aftercooling. Upcoming amendments to the compression-ignition engine standards will most likely require the use of one or more methods of aftertreatment. More discussions with the industry are necessary prior to such regulatory activity.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None

This item was solely for information and thus no Board action was necessary.

RESPONSIBLE DIVISION: Mobile Source Control Division

STAFF REPORT: None

**02-8-4      2002 Annual Air Quality Legislative Summary**

SUMMARY OF AGENDA ITEM:

The Legislative Office presented a review of air quality legislation from the 2002 legislative year. The major themes discussed were: greenhouse gas reduction from motor vehicles, Smog Check II in the San Francisco Bay Area, indoor air pollution, environmental justice, and the outlook on the state budget. The presentation also included a review of additional legislation affecting the agency.

ORAL TESTIMONY: None

FORMAL BOARD ACTION: None

RESPONSIBLE DIVISION: Chairman's Office; Legislative Office

STAFF REPORT: Yes